

1           1.     A method for disinfecting a root canal during an endodontic procedure,  
2 comprising:

3                 providing access to a root canal of a tooth; and

4                 introducing a viscous disinfecting composition into the root canal, wherein  
5 said viscous disinfecting composition is able to adhere to walls of the root canal so as  
6 to enable the disinfecting composition to disinfect the root canal.

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8           2.     A method as defined in claim 1, wherein said viscous disinfecting  
9 composition comprises sodium hypochlorite, water, and a gelling agent.

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11           3.     A method as defined in claim 2, wherein the gelling agent comprises at least  
12 one finely divided particulate gelling agent.

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14           4.     A method as defined in claim 3, wherein the finely divided particulate  
15 gelling agent comprises at least one of fumed silica or fumed aluminum oxide.

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17           5.     A method as defined in claim 2, wherein the gelling agent comprises at least  
18 one polymeric gelling agent.

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20           6.     A method as defined in claim 5, wherein the gelling agent comprises  
21 carboxypolymethylene.

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23           7.     A method as defined in claim 2, wherein the sodium hypochlorite is included  
24 in a range of about 0.01% to about 50% by weight of the viscous disinfecting composition.

1           8.       A method as defined in claim 2, wherein the sodium hypochlorite is included  
2 in a range of about 0.1% to about 40% by weight of the viscous disinfecting composition.

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4           9.       A method as defined in claim 2, wherein the sodium hypochlorite is included  
5 in a range of about 1% to about 20% by weight of the viscous disinfecting composition.

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7           10.      A method as defined in claim 2, wherein the sodium hypochlorite is included  
8 in a range of about 2% to about 10% by weight of the viscous disinfecting composition.

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10          11.      A method as defined in claim 1, further comprising:  
11                   cleaning at least a part of the root canal with an endodontic tool; and  
12                   irrigating the root canal to remove the viscous disinfecting composition and  
13                   any loosened pulp or other debris.

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15          12.      A method as defined in claim 11, wherein the endodontic tool comprises an  
16 endodontic file and wherein the viscous disinfecting composition is introduced into the root  
17 canal by means of the endodontic file.

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19          13.      A method as defined in claim 1, wherein the viscous disinfecting composition  
20 is left in the root canal for a time in a range of about 1 minute to about 1 hour.

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22          14.      A method as defined in claim 1, wherein the viscous disinfecting composition  
23 has a viscosity in a range from about 500 cps to about 200,000 cps.

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1           15.     A method as defined in claim 1, wherein the viscous disinfecting composition  
2 has a viscosity in a range from about 5,000 cps to about 100,000 cps.

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4           16.     A method as defined in claim 1, wherein the viscous disinfecting composition  
5 has a viscosity in a range from about 10,000 cps to about 50,000 cps.

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7           17.     A method as defined in claim 1, wherein the viscous disinfecting composition  
8 has a pH in a range from about 8 to about 12.5.

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10          18.     A method as defined in claim 1, wherein the viscous disinfecting composition  
11 has a pH in a range from about 10 to about 12..

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13          19.     A method as defined in claim 1, wherein the viscous disinfecting composition  
14 has a pH in a range from about 11 to about 11.5.

1           20.    A method for disinfecting a root canal during an endodontic procedure,  
2 comprising:

3                   providing access to a root canal of a tooth; and

4                   introducing a viscous disinfecting composition into the root canal comprising  
5 sodium hypochlorite, water, and a gelling agent.

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7           21.    A method as defined in claim 17, wherein the gelling agent comprises fumed  
8 silica.

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10          22.    A method as defined in claim 17, wherein the viscous disinfecting  
11 composition has a pH in a range of about 10 to about 12.

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13          23.    A method as defined in claim 17, wherein the viscous disinfecting  
14 composition has a pH in a range of about 11 to about 11.5.

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16          24.    A method as defined in claim 17, further comprising:

17                   cleaning at least a part of the root canal with an endodontic tool; and

18                   irrigating the root canal to remove the viscous disinfecting composition and  
19 any loosened pulp or other debris.

25. A method for disinfecting a root canal during an endodontic procedure comprising:

providing access to a root canal of a tooth; and

introducing a viscous disinfecting composition into the root canal comprising sodium hypochlorite in an amount in a range of about 1% to about 20% by weight, water, and fumed silica in an amount in a range of about 1% to about 10% by weight.

26. A method as defined in claim 25, wherein the viscous disinfecting composition further includes a base in an amount so that the pH of the composition is in a range of about 10 to about 12.

27. A method as defined in claim 25, wherein the viscous disinfecting composition further includes a base in an amount so that the pH of the composition is in a range of about 11 to about 11.5.